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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,657	04/16/2001	Nathalie Garcon	B 45158	2235

20462 7590 09/10/2002

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EXAMINER
LUCAS, ZACHARIAH

ART UNIT	PAPER NUMBER
1648	16

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/807,657	GARCON, NATHALIE	
	Examiner	Art Unit	
	Zachariah Lucas	1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32-115* is/are pending in the application.

4a) Of the above claim(s) *38 and 63-70* is/are withdrawn from consideration.

5)☒ Claim(s) *46-49 and 115* is/are allowed.

6)☒ Claim(s) *32-37,39-41,43-45,50-62 and 71-114* is/are rejected.

7)☒ Claim(s) *42* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Groups I and A in Paper No. 8 is acknowledged. The traversal is on the ground(s) that search terms for one group will necessarily be shared with other Groups. This is not found persuasive because while the searches for the various inventions of the separate Groups may be somewhat overlapping, they are not coextensive in nature. References that would be excluded in narrowing search results for one invention may be included in as a prior art reference for another. In order to account for every invention, separate searches would have to be run to account for every limitation of the claims. The fact that a general search for immunostimulants and antigens adsorbed onto metallic particles may be run, does not account for the searches for specific types of immunostimulants, or antigens targeting different types of diseases. Since the invention comprises improvements on known adjuvant compositions (i.e. by adsorbing immunostimulants onto separate metallic particles from the antigens), the fact that the various inventions share a general search as described above does not indicate a lack of burden on the examiner.

However, the examiner agrees that the originally filed claims reading on adjuvant compositions comprising the QS21 saponin (Group I(C)) should be considered with the elected invention as this Group of adjuvants is claimed in combination with the elected inventions (i.e. adjuvant compositions wherein the immunostimulant is a lipid). Thus, the restriction between Group I(A) and Group I(C) is withdrawn.

The requirement with regards to the other inventions is still deemed proper and is therefore made FINAL.

2. Claims 38, and 63-70 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 8.

Specification

3. The disclosure is objected to because of the following informalities:

On page 4, lines 6-7 of the application, the specification reads "the substantially free at immunostimulant." It appears that the word "at" should be substituted with "of."

Appropriate correction is required.

Claim Objections

4. Claim 42 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer to the multiple claims from which it is depending in alternative form. See MPEP § 608.01(n). However, claim 42 describes a vaccine comprising "an adjuvant composition according to claims 32-38." Accordingly, the claim 42 has not been further treated on the merits. Claims 53, 71, 82, 93, and 104 are objected to a dependant on claim 42.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 32-37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 32, the claim limits the adjuvant composition to one wherein the immunostimulant is not a saponin derived from the bark of Quillaja Saponaria Molina." However, the specification teaches that the immunostimulants of the invention include plant-derived saponins. P. 5, lines 17-31. Thus, the specification does not teach any reason for the exclusion of saponins from the meaning of the word immunostimulants in the claims. As the specification provides no description for that element of the claim, the claim 32 and those claims dependant on it are rejected for lack of written description.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 32-37, 39-41, and 43-45, 50-62, and 71-114 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims describe a method of making a vaccine, or a vaccine, comprising "a) an adjuvant composition comprising an immunostimulant adsorbed onto a metallic salt particle, characterized in that the metallic salt particle is substantially free of other antigen, and b) an antigen." The claim refers to other antigens before

the first antigen has been introduced. Thus, the claim is indefinite for lack of antecedent basis for the claimed term.

However, the claim is so worded that it indicates that the later introduced antigens may not be the focus of the term "other," or that the immunostimulants may themselves comprise antigens. In reading the claim, and the specification, one of ordinary skill in the art could interpret the claim in one of two ways. First, that the "other antigens" refer to antigens other than the later identified component of the vaccine. Or, the phrase could also be interpreted such that the "other antigen" intends to exclude (substantially) adsorbents to the metallic salt other than the immunostimulant. Thus, the claim is indefinite because it has multiple reasonable interpretations. The same holds true for claims 44 and 45, except that the confusion is between the saponin and antigen, rather than an immunostimulant and the antigen. The fact that the claims to the adjuvant composition alone do not later introduce a first antigen does not render the claim less indefinite. This is because one skilled in the art of vaccines would know that the claimed adjuvant is intended for use with an antigen, and would therefore assume the antigen even though it is not explicitly made a part of the claimed invention.

If the later of the above interpretations is correct, use of the term "other antigens" is misleading because the immunostimulant is not introduced as an antigen, but as component to the vaccine designed to increase the efficacy of the antigen vaccine. In this case, the claim should read more like the following: a vaccine composition comprising the admixture of a) an antigen, and b) an immunostimulant adsorbed onto a metallic salt, characterized in that the metallic salt particle to which the immunostimulant is adsorbed is substantially free of antigen.

Allowable Subject Matter

9. Claims 46-49 and 115 are allowed. The subject matter of these claims appears to be free of the prior art.

Conclusion

10. The following prior art references are made of record and are considered pertinent to applicant's disclosure. However, while relevant they are also not used as a basis for rejection for the stated reasons.

Fries et al., Proc. Natl. Acad. Sci. 89:358-362. This reference teaches a liposomal vaccine wherein the antigen and a monophosphoryl lipid A are both in a liposome that is adsorbed to aluminum hydroxide. This reference is relevant in that it discloses that MPA is an effective immunostimulant. Further, while the reference does not teach the claimed invention, i.e. the antigen and immunostimulant are both adsorbed to the metallic salt. However, the reference also teaches that there are benefits to putting MPA into a liposome (i.e. to reduce its toxic effects). P. 360.

U.S. Patent Number 5,750,110, issued to Prieels et al. (Prieels). Prieels discloses a vaccine composition made by the addition of Aluminum hydroxide and 3-de-O-acylated monophosphoryl lipid A (3D-MPL) to a mixture of Hepatitis B surface antigen that has been incubated with (and has thus inherently adsorbed to) aluminum hydroxide separately. Col. 7, lines 50-55. The reference also teaches that the vaccine comprises QS21. Id. However, the reference does not teach that the immunostimulants must be adsorbed on adjuvant particle other than those to which the antigen is adsorbed.

U.S. Patent 5,776,468, issued to Hauser et al. (Hauser). This patent teaches that 3-O-deacylated monophosphoryl lipid A (3D-MPL), is an effective immunostimulant. The reference further teaches the use of the immunostimulant in vaccine compositions wherein the antigen is adsorbed to aluminum hydroxide. See e.g., claims 42-45. Further, the reference does not require that the antigen and the immunostimulant be adsorbed to the same adjuvant metallic salt particles.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachariah Lucas whose telephone number is 703-308-4240. The examiner can normally be reached on Monday-Friday, 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 703-308-4027. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Z. Lucas
Patent Examiner
September 6, 2002

JAMES HOUSEL 9/9/02
SUPERVISORY PATENT EXAMINER
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